JAPANESE MEDICAL MATERIAL

A-393.

ANTI D. M.

(Phthalyl-dimethyl-glucothamide)

Medical No. 233

5 June 1946

MEDICAL ANALYSIS SECTION

5250th Technical Intelligence Company
APO 500

ANTI D. M.

(Phthalyl-dimethyl-glucothamide)

SOURCE: Tokyo, Japan.

IMPORTANCE: Not previously reported. An organic compound intended for oral administration during diabetic therapy. No identical product is listed in standard American references.

DESCRIPTION: Twenty white tablets, averaging 0.23 gm. each, are contained in an amber vial enclosed in a cardboard box.

SUMMARY OF GENERAL INFORMATION: Chemically, Anti D. M. is phthalyldimethyl-glucothamide. No chemical formula is given. It is available in powder form and as tablets. The pure compound is colorless, soluble in water, slightly soluble in alcohol, and insoluble in ether.

The oral dose is 2 gm. of the powder per day, divided into three doses, or 2 to 3 tablets per dose. Administration should be made one hour before meals, with water.

This product is intended for the oral treatment of diabetes. It is claimed that Anti D. M. decreases the blood sugar, stimulates pancreatic function, acts as a diuretic, and eliminates glycosuria within 3 to 4 days after its administration. It is further claimed that there is no danger of causing hypoglycemia and that no dietary restrictions are necessary.

A translation of the literature enclosed with the product is part of this report and includes its physical and chemical properties, advantages, indications, directions and dosage, cautions, packaging and manufacturer.

Experimental evidence to justify the claims for this product, or references to publications, are not given. The pharmacological properties of this compound should be thoroughly investigated inasmuch as it is the only synthetic substance claimed to have anti-diabetic properties after oral administration.

PHOTOGRAPHS:

Figure 1 - Anti D. M. and box container

Figure 2 - Anti D. M. literature

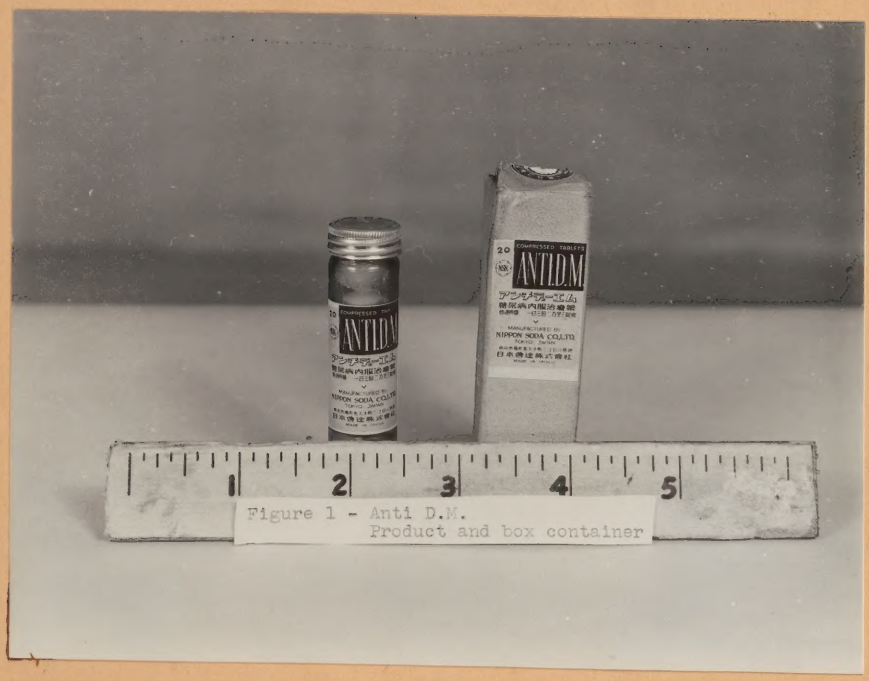

Figure 1 - Anti D.M.
Product and box container

藥學博士　高本隆二氏創製

糖尿病内服新治療劑

アンチ・テー・エム　Anti-D. M.

（製法特許　商標登録　出願中）

本品は藥學博士高本隆二氏が研究完成せる血糖降下並に膵臟機能亢進有効成分にして、近代藥物學上に於ける世界嚆矢の革新的研究として斯界の耳目を聳動せるものなり、即ち其組成及び理化學的性狀はフタリル・ヂ・メチル・グリコチアミドにして生理的作用はインシュリンに稍々類似するも、獨り本劑のみは内服に依りて治療的威力を遺憾なく發揮し得べき空前の一大發明なり。然も成分純粹、耐久性に富み且つ嚴密なる理化學的並に生理學的檢査を經たるものなるを以て其効力一定不變にして奏効確實なるは本劑の一大特色なり。

○理化學的性狀

本品は白色短針狀結晶にして水に溶解し、アルコールに難溶、エーテルに不溶、攝氏二一二度に於て熔融す、而して主成分に他の藥物を配合し以て藥物併合療法を發揮せしめたるものなり。

○特　徴

一、本劑の血糖降下作用は極めて優秀的確なるのみならず、インシュリンの如く血糖過少症狀を招致する危險絶無にして、糖酸化を進むると同時に糖のグリコゲン化を促進す。

一、本劑は内服藥なるが故に用法簡易且つ從來の糖尿病治療藥の場合の如き嚴重なる攝食或は減食等の所謂食餌療法を必要とせず、血糖降下作用の外に利尿作用を兼有し、服藥後三四日にて尿糖の著減を示す。

一、本劑は臟器療法的意味に於て卓効を奏し、且つ生体内に在りてはフオスフアーゲンを形成し以てエネルギーの媒体をなし健康を維持するを得。

○適應症

膵臟性糖尿病、腎臟性糖尿病、糖尿性陰萎、其他尿酸性關節炎、火傷、膽嚢炎、バセドウ氏病、フルンケル、カルブンケル、肝臟疾患、腎臟炎等。

○用法及用量

糖尿病治療劑として普通一日量二瓦を三回に分ち（錠劑は一回二―三錠宛）食前一時間に溫湯又は冷水を以て服用すべし。

注意、本劑は必ず食前一時間に服用するを要す、これ本劑の服用に依りて糖代謝機能の旺盛となれる時攝食するものにて何等特殊食物の制限を加へず。

一方には服藥前並に其後時々尿中糖量を檢し治癒の狀態を觀察すべし。

○包　裝

粉末（一〇〇瓦　二五瓦　五瓦）　錠劑（一〇〇錠　五〇錠）

東京市麹町區大手町二丁目八番地七

製造發賣元　日本曹達株式會社

電話丸ノ内(23)（代表一二七一番(6)　代表二四二一番(6)　代表四五一一番(6)）

Figure 2 - Anti D.M. Literature

TRANSLATION OF THE LITERATURE ENCLOSED WITH ANTI D. M.
Discovered by Ryuji Takamoto, Dr. of Pharmacology
Oral Medication in the Treatment of Diabetes

ANTI D. M.

(Patent of Manufacturing Process) Applied for
(Registration of Trade Mark)

This product, discovered and perfected by Ryuji Takamoto, Dr. of Pharmacology, contains active ingredients which decreases the sugar content in blood and stimulates the function of the pancreas and as the first epoch-making research from the standpoint of Pharmacology, it attracted world wide attention. Its chemical composition is phthalyl dimethyl glucothamide. This is the greatest discovery since its physiological action is somewhat similar to that of insulin. This drug in itself shows marked effects in the treatment of diabetes by oral medication. Moreover, it is pure and its strength can be retained indefinitely. The fact that its effect is certain and standardized by rigid chemical and physiological tests is it's greatest characteristic.

Physical and Chemical Properties:

This product is a white short needle-like crystal soluble in water, slightly soluble in alcohol, insoluble in ether and melting at 212°C. The effect of this drug is increased when combined with other drugs.

Advantages:

Not only is the sugar decreasing action of this drug superior but there is absolutely no danger of causing hypoglycemia. At the same time sugar is oxidized it increases glycogenesis.

As this drug is administered orally its method of use is simple and there is no necessity for strict diet or reducing the diet. Besides sugar decreasing action it has a diuretic action and there is a marked decrease of sugar in the urine 3 to 4 days after administration.

This drug shows remarkable effects in intestinal treatment. Moreover, it forms phosphagen, the base for energy, thereby maintaining health.

Indications:

Pancreatic diabetes
Kidney diabetes
Diabetic Impotence
Arthritis
Burns
Cholecystitis
Basedow's disease
Furuncles
Carbuncles
Diseases of the liver
Hepatitis

Directions and dosage:

In the treatment of diabetes the dosage is ordinarily 2 gm. per day divided into 3 doses. (If tablets, 2 to 3 tablets at a time) taken 1 hour before meals with warm or cold water.

Caution:

This drug must always be taken one hour before meals to allow the metabolism of sugar to reach its maximum level. There is no restriction of diet. Meanwhile, observe the state of recovery by examining the quantity of sugar in the urine before and after medication.

Packaging:

Powder - 25 gm.
100 gm.
250 gm.
Tablets - 100 tablets
250 tablets

Manufacturer and Seller:

No. 7, 5, 2-Chome Otemachi
Kojimachi Ku, Tokyo
Nippon Soda Co., Ltd.
Telephone-Marunouchi (23)
Long distance 1271 (6)
Long distance 2421 (6)
Long distance 4511 (6)